

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in this application:

Listing of Claims:

1.-22. (canceled).

23.-24. (withdrawn).

1 25. (new) An implantable device-implemented method of early detection and
2 monitoring of congestive heart failure in a patient, which comprises the steps of: measuring
3 local impedance of a portion of the patient's body generally occupied by the lungs solely
4 through surface mounted electrodes on the device with the device implanted subcutaneously
5 in the patient's body at the locality where the impedance measurements are to be performed,
6 determining when the local impedance measurements are indicative of a condition of
7 congestive heart failure other than from the existence of a state of edema of the patient, and
8 detecting respiratory rate and depth of respiration of the patient through circuitry of said
9 device electrically coupled to said electrodes as a measure of patient ventilation.

1 26. (new) The device-implemented method of claim 25, including:
2 controlling the pacing rate of a rate adaptive artificial cardiac pacemaker implanted in
3 the patient, according to the measured patient ventilation.

1 27. (new) The device-implemented method of claim 26, including:
2 employing an accelerometer in said device to detect physical activity of the patient and
3 to generate an activity signal as a secondary control of the pacing rate of said pacemaker.

1 28. (new) The device-implemented method of claim 25, including:
2 detecting the cardiopulmonary status of the patient, using the measured patient
3 ventilation.

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1 **29. (new)** The device-implemented method of claim 25, wherein the device is
2 implanted subcutaneously at the lower left side of the patient's thoracic cage.

1 **30. (new)** The device-implemented method of claim 25, including determining when
2 the impedance measurements exceed a predetermined threshold value indicative of a need for
3 immediate attention to a condition of congestive heart failure.

1 **31. (new)** An implantable device-implemented method of early detection and
2 monitoring of congestive heart failure in a patient, which comprises the steps of: measuring
3 local impedance of a portion of the patient's body generally occupied by the lungs solely
4 through surface mounted electrodes on the device with the device implanted subcutaneously
5 in the patient's body at the locality where the impedance measurements are to be performed,
6 determining when the local impedance measurements are indicative of a condition of
7 congestive heart failure based on factors other than the existence of edema, detecting the
8 patient's heart rate/activity pattern through said electrodes while concurrently monitoring said
9 local impedance measurements to evaluate cardiopulmonary status of the patient, and
10 evaluating the trend of the heart rate/activity pattern and said concurrent local impedance
11 measurements against one another over a selected period of time, as an additional indicia of
12 congestive heart failure.

1 **32. (new)** A body-implantable device to provide early detection of congestive heart
2 failure in a patient, comprising a circuit module having surface mounted electrodes of the
3 device arranged, when the device is implanted subcutaneously, for exposing said electrodes to
4 tissue in a portion of the patient's body generally occupied by the lungs, said circuit module
5 including circuitry that measures local impedance of said body portion through said surface
6 mounted electrodes and determines when the impedance measurements are indicative of a

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7 condition of congestive heart failure wherein the determination of congestive heart failure is
8 based on factors other than the existence of edema of the patient, said circuit module further
9 including an accelerometer arranged and adapted to detect physical activity of the patient and
10 to respond in real time to generate a concomitant signal to adjust pacing rate of an artificial
11 pacemaker implanted in the patient consonant with extent of the detected physical activity.